

CLAIMS

What is claimed is:

1. A keyless shoe lock assembly, comprising:
a shoe for abutting a work piece for at least one of stabilizing a tool, limiting the depth of a cut, and evenly distributing wear on a blade;
a shoe bracket connected to the shoe, for securing the shoe and having a plurality of teeth;
a lock plate enmeshed with the shoe bracket, for locking the shoe bracket and having a plurality of teeth for meshing with the plurality of teeth of the shoe bracket; and
a pin rotationally disposed of the shoe bracket and lock plate, for forcing the shoe bracket against the lock plate;

wherein rotation of the pin forces the shoe bracket against the lock plate, providing a plurality of discrete locking positions for the shoe bracket through a meshing of the plurality of teeth.

2. The keyless shoe lock assembly of claim 1, further comprising a lever assembly comprising at least one of a lever, a molded part, and a co-molded part, coupled with the pin for providing mechanical advantage for rotating the pin.

3. The keyless shoe lock assembly of claim 2, wherein the lever assembly comprises an interference protrusion for locking the lever assembly against a tool.

4. The keyless shoe lock assembly of claim 2, wherein the lever assembly comprises a plurality of teeth for locking the lever assembly against a tool.

5. The keyless shoe lock assembly of claim 2, wherein the lever assembly comprises a plurality of grooves for locking the lever assembly against a tool.

6. The keyless shoe lock assembly of claim 2, wherein the lever assembly comprises a friction interface for locking the lever assembly against a tool.

7. The keyless shoe lock assembly of claim 1, wherein the shoe bracket and the lock plate including the plurality of teeth include teeth for providing a plurality of discrete locking positions for the shoe bracket.

8. The keyless shoe lock assembly of claim 7, wherein the shoe bracket including the plurality of teeth includes teeth spaced substantially twice as far apart as the plurality of teeth of the lock plate.

9. The keyless shoe lock assembly of claim 7, wherein the lock plate including the plurality of teeth includes teeth spaced substantially twice as far apart as the plurality of teeth of the shoe bracket.

10. The keyless shoe lock assembly of claim 1, wherein at least one of the shoe bracket and the lock plate include anti-lock protrusions for preventing rotation of the pin while the shoe bracket is disposed in a position undesirable for locking.

11. A keyless shoe lock assembly, comprising:
 - a shoe for abutting a work piece for at least one of stabilizing a tool, limiting the depth of a cut, and evenly distributing wear on a blade;
 - a shoe bracket connected to the shoe, for securing the shoe and having a plurality of teeth;
 - a lock plate enmeshed with the shoe bracket, for locking the shoe bracket and having a plurality of grooves for meshing with the plurality of teeth of the shoe bracket; and
 - a pin rotationally disposed of the shoe bracket and lock plate, for forcing the shoe bracket against the lock plate;

wherein rotation of the pin forces the shoe bracket against the lock plate, providing a plurality of discrete locking positions for the shoe bracket through a meshing of the plurality of teeth of the shoe bracket and the plurality of grooves of the lock plate.

12. The keyless shoe lock assembly of claim 11, further comprising a lever assembly comprising at least one of a lever, a molded part, and a co-molded part, coupled with the pin for providing mechanical advantage for rotating the pin.

13. The keyless shoe lock assembly of claim 12, wherein the lever assembly comprises an interference protrusion for locking the lever assembly against a tool.

14. The keyless shoe lock assembly of claim 12, wherein the lever assembly comprises a plurality of teeth for locking the lever assembly against a tool.

15. The keyless shoe lock assembly of claim 12, wherein the lever assembly comprises a plurality of grooves for locking the lever assembly against a tool.

16. The keyless shoe lock assembly of claim 12, wherein the lever assembly comprises a friction interface for locking the lever assembly against a tool.

17. The keyless shoe lock assembly of claim 11, wherein the shoe bracket including the plurality of teeth and the lock plate including the plurality of grooves include teeth and grooves for providing a plurality of discrete locking positions for the shoe bracket.

18. The keyless shoe lock assembly of claim 11, wherein at least one of the shoe bracket and the lock plate include anti-lock protrusions for preventing rotation of the pin while the shoe bracket is disposed in a position undesirable for locking.

19. A keyless shoe lock assembly, comprising:
a shoe for abutting a work piece for at least one of stabilizing a tool, limiting the depth of a cut, and evenly distributing wear on a blade;
a shoe bracket connected to the shoe, for securing the shoe and having a plurality of grooves;
a lock plate enmeshed with the shoe bracket, for locking the shoe bracket and having a plurality of teeth for meshing with the plurality of grooves of the shoe bracket; and
a pin rotationally disposed of the shoe bracket and lock plate, for forcing the shoe bracket against the lock plate;

wherein rotation of the pin forces the shoe bracket against the lock plate, providing a plurality of discrete locking positions for the shoe bracket through a meshing of the plurality of grooves of the shoe bracket and the plurality of teeth of the lock plate.

20. The keyless shoe lock assembly of claim 19, further comprising a lever assembly comprising at least one of a lever, a molded part, and a co-molded part, coupled with the pin for providing mechanical advantage for rotating the pin.

21. The keyless shoe lock assembly of claim 20, wherein the lever assembly comprises an interference protrusion for locking the lever assembly against a tool.

22. The keyless shoe lock assembly of claim 20, wherein the lever assembly comprises a plurality of teeth for locking the lever assembly against a tool.

23. The keyless shoe lock assembly of claim 20, wherein the lever assembly comprises a plurality of grooves for locking the lever assembly against a tool.

24. The keyless shoe lock assembly of claim 20, wherein the lever assembly comprises a friction interface for locking the lever assembly against a tool.

25. The keyless shoe lock assembly of claim 19, wherein the shoe bracket including the plurality of grooves and the lock plate including the plurality of teeth include grooves and teeth for providing a plurality of discrete locking positions for the shoe bracket.

26. The keyless shoe lock assembly of claim 19, wherein at least one of the shoe bracket and the lock plate include anti-lock protrusions for preventing rotation of the pin while the shoe bracket is disposed in a position undesirable for locking.

27. A keyless shoe lock assembly, comprising:
a shoe for abutting a work piece for at least one of stabilizing a tool, limiting the depth of a cut, and evenly distributing wear on a blade;
a shoe bracket connected to the shoe, for securing the shoe and having a plurality of interference protrusions;
a lock plate enmeshed with the shoe bracket, for locking the shoe bracket; and
a pin rotationally disposed of the shoe bracket and lock plate, for forcing the shoe bracket against the lock plate;
wherein rotation of the pin forces the shoe bracket against the lock plate, providing a plurality of discrete locking positions for the shoe bracket through engagement of the interference protrusions of the shoe bracket with the lock plate.

28. The keyless shoe lock assembly of claim 27, further comprising a lever assembly comprising at least one of a lever, a molded part, and a co-molded part, coupled with the pin for providing mechanical advantage for rotating the pin.

29. The keyless shoe lock assembly of claim 28, wherein the lever assembly comprises an interference protrusion for locking the lever assembly against a tool.

30. The keyless shoe lock assembly of claim 28, wherein the lever assembly comprises a plurality of teeth for locking the lever assembly against a tool.

31. The keyless shoe lock assembly of claim 28, wherein the lever assembly comprises a plurality of grooves for locking the lever assembly against a tool.

32. The keyless shoe lock assembly of claim 28, wherein the lever assembly comprises a friction interface for locking the lever assembly against a tool.

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33. The keyless shoe lock assembly of claim 27, wherein the shoe bracket including the interference protrusions and the lock plate include interference protrusions for providing a plurality of discrete locking positions for the shoe bracket.

34. The keyless shoe lock assembly of claim 27, wherein at least one of the shoe bracket and the lock plate include anti-lock protrusions for preventing rotation of the pin while the shoe bracket is disposed in a position undesirable for locking.

35. A keyless shoe lock assembly, comprising:
a shoe for abutting a work piece for at least one of stabilizing a tool, limiting the
depth of a cut, and evenly distributing wear on a blade;
a shoe bracket connected to the shoe, for securing the shoe;
a lock plate enmeshed with the shoe bracket, for locking the shoe bracket and
having a plurality of interference protrusions; and
a pin rotationally disposed of the shoe bracket and lock plate, for forcing the shoe
bracket against the lock plate;

wherein rotation of the pin forces the shoe bracket against the lock plate, providing a
plurality of discrete locking positions for the shoe bracket through engagement of the
shoe bracket with the interference protrusions of the lock plate.

36. The keyless shoe lock assembly of claim 35, further comprising a lever
assembly comprising at least one of a lever, a molded part, and a co-molded part, coupled
with the pin for providing mechanical advantage for rotating the pin.

37. The keyless shoe lock assembly of claim 36, wherein the lever assembly
comprises an interference protrusion for locking the lever assembly against a tool.

38. The keyless shoe lock assembly of claim 36, wherein the lever assembly
comprises a plurality of teeth for locking the lever assembly against a tool.

39. The keyless shoe lock assembly of claim 36, wherein the lever assembly
comprises a plurality of grooves for locking the lever assembly against a tool.

40. The keyless shoe lock assembly of claim 36, wherein the lever assembly
comprises a friction interface for locking the lever assembly against a tool.

41. The keyless shoe lock assembly of claim 35, wherein the shoe bracket and the lock plate including the interference protrusions include interference protrusions for providing a plurality of discrete locking positions for the shoe bracket.

42. The keyless shoe lock assembly of claim 35, wherein at least one of the shoe bracket and the lock plate include anti-lock protrusions for preventing rotation of the pin while the shoe bracket is disposed in a position undesirable for locking.

43. A keyless shoe lock assembly, comprising:
a shoe for abutting a work piece for at least one of stabilizing a tool, limiting the depth of a cut, and evenly distributing wear on a blade;
a shoe bracket connected to the shoe, for securing the shoe and having a friction interface;
a lock plate enmeshed with the shoe bracket, for locking the shoe bracket and having a friction interface for engaging with the friction interface of the shoe bracket; and
a pin rotationally disposed of the shoe bracket and lock plate, for forcing the shoe bracket against the lock plate;

wherein rotation of the pin forces the shoe bracket against the lock plate, providing a plurality of discrete locking positions for the shoe bracket through engagement of the friction interface of the shoe bracket and the friction interface of the lock plate.

44. The keyless shoe lock assembly of claim 43, further comprising a lever assembly comprising at least one of a lever, a molded part, and a co-molded part, coupled with the pin for providing mechanical advantage for rotating the pin.

45. The keyless shoe lock assembly of claim 44, wherein the lever assembly comprises an interference protrusion for locking the lever assembly against a tool.

46. The keyless shoe lock assembly of claim 44, wherein the lever assembly comprises a plurality of teeth for locking the lever assembly against a tool.

47. The keyless shoe lock assembly of claim 44, wherein the lever assembly comprises a plurality of grooves for locking the lever assembly against a tool.

48. The keyless shoe lock assembly of claim 44, wherein the lever assembly comprises a friction interface for locking the lever assembly against a tool.

49. The keyless shoe lock assembly of claim 43, wherein the shoe bracket including the friction interface and the lock plate including the friction interface include friction interfaces for providing a plurality of discrete locking positions for the shoe bracket.

50. The keyless shoe lock assembly of claim 43, wherein at least one of the shoe bracket and the lock plate include anti-lock protrusions for preventing rotation of the pin while the shoe bracket is disposed in a position undesirable for locking.